

ROCK DECLARATION

Exhibit A

CURRICULUM VITAE

Name:

Kenneth L. Rock

Address:

145 Walnut Hill Road, Chestnut Hill, MA 02167

Date of Birth:

April 3, 1952

Education:

1974 B.A.

Washington University (Biology)

1978 M.D.

University of Rochester, Rochester, NY

(Medicine)

Postdoctoral Training:**Residencies:**

1979-1983

Peter Bent Brigham Hospital, Boston, MA

(Pathology)

Research Fellowships:

1978

University of Rochester School of Medicine,
Rochester, NY, Postdoctoral Fellow with Drs.
J. Kappler and P. Marrack

1980-1982

Harvard Medical School, Boston, MA,
Postdoctoral Fellow with Dr. Baruj
Benacerraf, Department of Pathology

Licensure and Certification:

1983-Present

Massachusetts License Registration

1983

American Board of Pathology, Certificate

Academic Appointments:

1982-1983

Instructor in Pathology, Harvard Medical
School, Boston, MA

1983-1986

Assistant Professor in Pathology,
Harvard Medical School, Boston, MA

1986-1997

Associate Professor in Pathology,
Dana Farber Cancer Institute, and Harvard
Medical School, Boston, MA

1997-present

Chairman and Professor of Pathology
University of Massachusetts Medical Center
Worcester, MA

Clinical Appointments:

1991-1997

Clinical Coordinator of Pathology, Dana-Farber Cancer Institute
Boston, MA

1991-1997

Consultant in Pathology, Brigham & Women's Hospital, Boston, MA

1997-present

Chairman of Pathology, University of Massachusetts Medical Center

Curriculum Vitae Continued: Dr. Kenneth L. Rock

Honors:

1974	Summa cum laude, B.A., Washington University, St. Louis, MO
1974	Phi Beta Kappa
1995-1998	Co-Chairman, then Chairman, FASEB Summer Immunology Conferences.
1998	Merit Award, NIH
2003	Outstanding educator award, UMass Medical School
2003	Benacerraf Lecture, Harvard Medical School

Editorial Board:

1987-1992	Associate Editor, Journal of Immunology
1992-1996	Section Editor, Journal of Immunology
1997-2003	Deputy Editor, Journal of Immunology
1994	Section Editor, Current Opinion in Immunology
1992-Present	Cellular Immunology

Professional Societies:

1984-Present	American Association of Immunologists
1990-Present	American Association for the Advancement of Science
1990-1997	American Association for Laboratory Animal Science.
1997-Present	College of American Pathologists
1997-Present	United States and Canadian Academy of Pathology
1997-Present	New England Society of Pathologists

Educational Committees/Activities:

1981-1988	Liaison between Department of Pathology and M.D.-Ph.D. Programs, Harvard Medical School, Boston, MA
1982-1997	Faculty, Committee on Immunology, Harvard Medical School, Graduate Program
1985-1993	Faculty, Cell and Developmental Biology, Harvard Medical School, Graduate Program
1985-1996	Co-organizer, Committee of Immunology Seminar Series, Harvard Medical School
1986-1996	Lecturer, Immunobiology 204 a,b, Harvard Medical School
1991-1996	Principle Faculty, HST 175, Cellular and Molecular Immunology, Harvard Medical School
1993-1997	Faculty, Harvard Medical School & Massachusetts Institute of Technology, M.D. HST Program
1995	Tutor, Identity, Microbes and Defense, Harvard Medical School.
1997-present	Faculty, Immunology and Virology, University of Massachusetts Medical Center, graduate program
1998-2002	Lecturer, Advanced Immunology 770, University of Massachusetts Medical Center

Curriculum Vitae Continued: Dr. Kenneth L. Rock

1998-present	Lecturer, Biology of Disease University of Massachusetts Medical Center
1999-2003	Block leader and lecturer, Core curriculum University of Massachusetts Medical Center
2002-present	Lecturer, Advanced Topics in Tumor Biology University of Massachusetts Medical Center

Administrative and Professional Committees

1989-1997	Co-chairman, Animal Care and Use Committee Dana Farber Cancer Institute
1993-1996	Membership Committee, American Association of Immunologists
1995-1997	Block Co-Chairman, then Block Chairman, Program Committee, American Association of Immunologists.
1997-present	Executive council, University of Massachusetts Medical Center
1997-1999	Chancellor's Advisory Committee, University of Massachusetts Medical Center
1997-1999	Clinical Policies Committee Executive Council, University of Massachusetts Medical Center
1997-1999	Group Practice Advisory Council, University of Massachusetts Medical Center
1998-2001	Cancer Center Executive Committee, University of Massachusetts Medical Center
1998-2007	Clinical Chairs Council, University of Massachusetts Medical Center
1999-2007	Research Advisory Council, University of Massachusetts Medical Center
2000-present	Immunology Training Program Steering Committee, University of Massachusetts Medical Center
2001-2003	UMass Cancer Center Advisory Board
2001	Nominating Committee, American Association of Immunologists
2003-2007	Cancer Immunology Task Force, American Association of Cancer Research
2006	Nominating Committee, American Association of Immunologists
2007-present	Finance Committee, American Association of Immunologists

Industrial Activities:

1992	Scientific founder, Proscript Inc. (MyoGenics Inc.), Cambridge, MA. (acquired by Millennium Pharmaceuticals)
1992-1999	Scientific advisory board and consultant, Proscript Inc. (formerly MyoGenics Inc.), Cambridge, MA.
1994	Scientific founder, Corixa Corp., Seattle, WA
1994-2005	Scientific consultant, Corixa Corp., Seattle, WA
2000-2005	Founding scientific board, Diamed (formerly SPRL), Cambridge, MA
2005	Consultant, Ipsen
2006-present	Scientific advisory board and consultant, Evogenix

Curriculum Vitae Continued: Dr. Kenneth L. Rock

Bibliography:

Journals:

1. Gottlieb DI, Rock KL, Glaser L. A gradient of adhesive specificity in the developing avian retina. 1976. *Proc. Natl. Acad. Sci. USA*, 73:410-414.
2. Swierkosz JE, Rock KL, Marrack P, Kappler J. The role of H-2 linked genes in helper T cell function. II. Isolation on antigen-pulsed macrophages of two separate populations of F1 helper T cells each specific for Ag and one set of parental H-2 products. 1978. *J. Exp. Med.*, 147:554-570.
3. Letvin NL, Rock KL, Nepom JT, Gramm CF, and Benacerraf B. Antibody responses to Trinitrophenyl (TNP)-L-Glutamic Acid 60-L-Alanine³⁰-L-Tyrosine (GAT) in microcultures: Anti-hapten and anti-carrier responses appear to be under separable control. 1982. *Cell. Immunol.* 71:89-98.
4. Sy M-S, Lee SH, Tsurufuji M, Rock KL, Benacerraf B, and Finberg R. Two distinct mechanisms regulate the *in vivo* generation of cytotoxic T cells. 1982. *J. Exp. Med.* 156:918-923.
5. Rock KL. The role of Ia molecules in the activation of T lymphocytes. I. The activation of an IL-1 dependent IL-2 producing T cell hybridoma by Con A requires an interaction which is not H-2 restricted, with an Ia-bearing accessory cell. 1982. *J. Immunol.* 129:1360-1366.
6. Rock KL, Barnes MC, Germain RN, and Benacerraf B. The role of Ia molecules in the activation of T lymphocytes. II. Ia restricted recognition of allo K/D antigens is required for Class I MHC stimulated mixed lymphocyte responses. 1983. *J. Immunol.* 130:457-462.
7. Rock KL, and Benacerraf B. The role of Ia molecules in the activation of T lymphocytes. III. Antigen-specific, Ia restricted, Interleukin 2-producing T cell hybridomas with detectable affinity for the restricting I-A molecules. 1983. *J. Exp. Med.* 157:359-364.
8. Rock KL, and Benacerraf B. Inhibition of antigen-specific T lymphocyte activation by structurally related Ir gene controlled polymers: Evidence of specific competition for accessory cell antigen-presentation. 1983. *J. Exp. Med.* 157:1618-1634.
9. Rock KL, and Benacerraf B. The role of Ia molecules in activation of T lymphocytes. IV. The basis of the thymocyte IL-1 response and its possible role in the generation of the T cell repertoire. 1984. *J. Immunol.* 132:1654.
10. Rock KL, and Benacerraf B. Thymic T cells are driven to expand upon interaction with self-Class II MHC gene products on accessory cells. 1984. *Proc. Natl. Acad. Sci. USA* 81:1221-1224.

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11. Rock KL, and Benacerraf B. Selective modification of a private I-A allo stimulating determinant(s) upon association of antigen with an antigen-presenting cell. 1984. *J. Exp. Med.* 159:1238.
12. Yeh ETH, Benacerraf B, and Rock, K.L. Analysis of thymocyte MHC specificity with thymocyte hybridomas. 1984. *J. Exp. Med.* 160:799.
13. Rock KL, Benacerraf B, and Abbas AK. Antigen-presentation by hapten-specific B lymphocytes. I. Role of surface immunoglobulin receptors. 1984. *J. Exp. Med.* 160:1102-1113.
14. Rock KL, Yeh ETH, and Benacerraf B. Selection of thymocyte MHC restriction specificity in vitro. 1984. *J. Mol. Cell. Immunol.* 1:311-320.
15. Rock KL, and Benacerraf B. Inhibition of antigen-specific T lymphocyte activation by structurally related Ir gene controlled polymers. II. Competitive inhibition of I-E restricted antigen-specific T cell responses. 1984. *J. Exp. Med.* 160:1864-1879.
16. Abbas AK, Haber SI, and Rock KL. Antigen-presentation by hapten-specific B lymphocytes. II. Specificity and properties of antigen-presenting B lymphocytes, and function of immunoglobulin receptors. 1985. *J. Immunol.* 135:1661-1667.
17. Falo LD Jr, Sullivan K, Benacerraf B, Mescher MF, and Rock KL. Analysis of antigen-presentation by metabolically inactive accessory cells and their isolated membranes. 1986. *Proc. Natl. Acad. Sci. USA*, 82:6647-6651.
18. Rock KL, Yeh ETH, Gramm CF, Haber SI, Reiser, H, and Benacerraf B. TAP, a novel T cell activating protein involved in the stimulation of MHC restricted T lymphocytes. 1986. *J. Exp. Med.* 163:315-33.
19. Reiser H, Yeh ETH, Gramm CF, Benacerraf B, and Rock KL. The genes encoding T cell activating protein, TAP, map to the Ly 6 locus. 1986. *Proc. Natl. Acad. Sci. USA* 83:2954-2958.
20. Yeh ETH, Reiser H, Benacerraf B, and Rock KL. The expression, function, and ontogeny of a novel T cell activating protein, TAP, in the thymus. 1986. *J. Immunol.* 137:1232.
21. Rock, K.L., Haber SI, Liano D, Benacerraf B, and Abbas AK. Antigen-presentation by hapten-specific B lymphocytes. III. Analysis of the immunoglobulin dependent pathway of antigen-presentation to Interleukin 1 dependent T lymphocytes. 1986. *Eur. J. Immunol.* 16:1407-1212.
22. Falo LD Jr, Benacerraf B, and Rock KL. Phospholipase pretreatment of antigen pulsed accessory cells selectively inhibits antigen-specific MHC restricted, but not allospecific stimulation of T lymphocytes. 1986. *Proc. Natl. Acad. Sci. USA* 83:6694-6697.

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23. Yeh ETH, Reiser H, Benacerraf B, and Rock KL. Expression of a novel T cell activating protein (TAP) in peripheral lymphocyte subsets. 1986. *Proc. Natl. Acad. Sci. USA*, 83:7242-7428.
24. Reiser H, Ottegen H, Yeh ETH, Terhorst C, Low MG, Benacerraf B, and Rock KL. Structural characterization of the TAP molecule: A phosphatidylinositol-linked glycoprotein from the T cell receptor/T3 complex and Thy-1. 1986. *Cell*, 47:365-370.
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29. Yeh ETH, Reiser H, Bamezai A, and Rock KL. TAP transcription and phosphatidylinositol linkage mutants are defective in activation through the T cell receptor. 1988. *Cell* 52:665-674.
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31. Bamezai A, Reiser H, and Rock KL. T cell receptor/CD3 negative variants are unresponsive to stimulation through the Ly-6 encoded molecule, TAP. 1988. *J. Immunol.* 141:1423-1428.
32. Michalek M, Benacerraf B, and Rock KL. Two genetically identical antigen-presenting cell clones display heterogeneity in antigen processing. 1989. *Proc. Natl. Acad. Sci. USA* 86:3316-3320.
33. Bamezai A, Goldmacher V, Reiser H, and Rock KL. Internalization of phosphatidylinositol-anchored lymphocyte proteins. I. Documentation and potential significance for T cell stimulation. 1989. *J. Immunol.* 143: 3107-3116.
34. Dang LH, Michalek M, Takei F, Benacerraf B, and Rock KL. Role of ICAM-1 in antigen-presentation demonstration by ICAM-1 defective mutants. 1989. *J. Immunol.* 144:4082-4091.

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35. Rock KL, Rothstein L, and Gamble S. Generation of class I MHC restricted T-T hybridomas. 1990. *J. Immunol.* 145:804-811.
36. Rock KL, Gamble S, and Rothstein L. Presentation of exogenous antigen with class I major histocompatibility molecules. 1990. *Science* 249:918-921.
37. Rock KL, Rothstein L, Gamble S, and Benacerraf B. Reassociation with 2-microglobulin is necessary for Kb class I-major histocompatibility complex binding of exogenous peptides. 1990. *Proc. Natl. Acad. Sci. USA.* 87:7517-7521.
38. Rock KL, Gamble S, Rothstein L, and Benacerraf B. Reassociation with 2-microglobulin is necessary for Db class I major histocompatibility complex binding of exogenous influenza peptide. 1991. *Proc. Natl. Acad. Sci. USA.* 88:301-304.
39. Michalek M, Benacerraf B, and Rock KL. Weak base amines can inhibit class I-MHC restricted antigen presentation. 1991. *J. Immunol.* 146:449-456.
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41. McGrew JT, and Rock KL. Isolation, expression and sequence of the TAP/Ly-6A.2 chromosomal gene. 1991. *J. Immunol.* 146:3633-3638.
42. Bamezai A, and Rock KL. Effect of ras-activation on the expression of glycosyl-phosphatidylinositol-anchored proteins on the plasma membrane. 1991. *Oncogene* 6:1445-1451.
43. Dang LH, and Rock KL. Crosslinking of surface immunoglobulin receptors on B lymphocytes induces LFA-1 and ICAM-1 dependent adhesion. 1991. *J. Immunol.* 146:3273-3279.
44. Rock, KL, Gramm CF, and Benacerraf B. Low temperature and peptides favor the formation of class I heterodimers on RMA-S cells at the cell surface. 1991. *Proc. Natl. Acad. Sci., USA* 88:4200-4204.
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46. McGrew JT, and Rock KL. Stimulation of human jurkat cells by monoclonal antibody crosslinking of transfected-TAP/Ly-6A.2 molecules. 1991. *Cellular Immunology*. 137:118-126.
47. Vidard L, Rock KL., and Benacerraf, B. The generation of immunogenic peptides can be selectively increased or decreased by proteolytic enzyme inhibitors. 1991. *J. Immunol.* 147:1786-1791.

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48. Bamezai A, Goldmacher VS, and Rock, KL. Internalization of glycosyl-phosphatidylinositol (GPI) anchored lymphocyte proteins. II. GPI-anchored and transmembrane molecules internalize through distinct pathways. 1992. *Eur. J. Immunol.* 22:15-21.
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50. Michalek, MT, Benacerraf, B, and Rock, KL. The class II MHC-restricted presentation of endogenously synthesized ovalbumin displays clonal variation, requires endosomal/lysosomal processing, and is up-regulated by heat shock. 1992. *J. Immunol.* 148:1016-1024.
51. Rock KL, Rothstein L, Gamble S, Gramm CF, and Benacerraf B. Chemical crosslinking of class I molecules on cells creates receptive class I molecules. 1992. *J. Immunol.* 148:1451-1457.
52. Rock KL, Rothstein L, Fleischacker C, and Gamble S. Inhibition of class I and class II MHC-restricted antigen presentation by CTL's specific for an exogenous antigen. 1992. *J. Immunol.* 148:3028-3033
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54. Vidard L, Rock KL, Couderc J, Mouton D, and Benacerraf B. Processing and presentation of ovalbumin in mice genetically selected for antibody response. 1992. *Eur. J. Immunology.* 22:2165-2168.
55. Vidard L, Rock KL, and Benacerraf B. Heterogeneity in antigen processing by different types of APCs. Effect of cell culture on antigen processing ability. 1992. *J. Immunol.* 149:1905-1911.
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57. Rock, K.L., Rothstein, L., and Benacerraf, B. Analysis of the association of peptides of optimal length to class I-molecules on the surface of cells. 1992. *Proc. Natl. Acad. Sci.* 89:8918-8922.
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59. Rock, K.L., Fleischacker, C., and Gamble, S. Peptide-Priming of Cytolytic T cell immunity in vivo using β 2-microglobulin as an adjuvant. 1993 *J. Immunol.* 150:1244-1252.

Curriculum Vitae Continued: Dr. Kenneth L. Rock

60. Dang, L.H., Lien, L.L., and Rock, K.L. A mutant APC defective in Ag presentation expresses class II MHC molecules with an altered conformation. 1993. *J. Immunol.* 150: 4206-4217
61. Michalek, M.T., Grant, E., Gramm, C., Goldberg, and Rock, K.L. A role for the ubiquitin-dependent proteolytic pathway in MHC class I-restricted antigen presentation. 1993. *Nature.* 363: 552-554
62. Kovacsovics-Bankowski, M., Clark, K., Benacerraf, B., and Rock, K.L. Efficient MHC class I presentation of exogenous antigen upon phagocytosis by MØs. 1993. *Proc. Natl. Acad. Sci. USA* 90: 4942-4946
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64. Pinto, V., and K. L. Rock. Extracellular matrix-induced stimulation of a CD4⁺ CD8⁻ thymic T-lymphoma cell line 1994. *Cellular Immunol.* 155: 144- 155.
65. Gaczynska, M., Rock, K. L., Spies, T., and Goldberg, A. Peptidase activities of proteasomes are differentially regulated by the MHC-encoded genes LMP2 and LMP7 . 1994. *Proc. Natl. Acad. Sci. USA* 91: 9212-9217
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67. Kovacsovics-Bankowski, M., and Rock, K.L. Presentation of exogenous antigens by macrophages: Analysis of MHC class I and II presentation and regulation by cytokines. 1994. *Eur. J. Immunol.* 24: 2421-2428
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69. Kovacsovics-Bankowski, M., and Rock, K.L. A phagosome-to-cytosol pathway for exogenous antigens presented on MHC class I molecules. 1995. *Science.* 267: 243-246.
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Curriculum Vitae Continued: Dr. Kenneth L. Rock

72. Grant, E.P., Michalek, M.T., Goldberg, A.L., and Rock, K.L. Rate of antigen degradation by the ubiquitin-proteasome pathway influences MHC class I presentation. 1995. *J. Immunol.* 155: 3750-3758
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75. Vidard, L., Kovacsics-Bankowski, M., Kraeft, S-K., Chen, L.B., Benacerraf, B., and Rock, K.L. Analysis of MHC class II presentation of particulate antigen by B lymphocytes. 1996. *J. Immunol.* 156:2809-2818
76. Rock, K.L., and Clark, K. Analysis of the role of MHC class II presentation in the stimulation of cytotoxic T lymphocytes by antigens targeted into the exogenous antigen-MHC class I presentation pathway. 1996. *J. Immunol.* 156:3721-3726
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79. Mazzaccaro, R.J., Gedde, M., Jensen, E.R., van Santen, H.M., Ploegh, H.L., Rock, K.L. and Bloom, B.R. Major histocompatibility class I presentation of soluble antigen facilitated by mycobacterium tuberculosis infection. 1996. *Proc. Natl. Acad. Sci. USA* 93: 11786-11791
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Curriculum Vitae Continued: Dr. Kenneth L. Rock

83. Henderson, SC., Berezovskaya, A., English, A., Palliser, D., Rock, K.L. and Bamezai, A. CD4+ T cells mature in the absence of major histocompatibility complex class I and class II expression in Ly-6A.2 transgenic mice. 1998. *J. Immunol.* 161:175-82.
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86. Mandl, S., Sigal, L., Rock, K.L. and Andino, R. Poliovirus vaccine vectors elicit a cytotoxic immunity that protects against tumors. 1998. *Proc. Natl. Acad. Sci. USA* 95: 8216-21
87. Sigal, LJ., Reiser, H., and Rock, K.L. The role of B7.1 and B7.2 costimulation in CTL priming and generation of CTL effectors in vivo. 1998. *J. Immunol.* 161: 2740-2745.
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89. Sigal, LJ, Crotty, S., Andino, R., and Rock, K.L. Cytotoxic T cell immunity to virus-infected non-haematopoietic cells requires presentation of exogenous antigen. 1999. *Nature* 398: 77-80
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94. Fernandes, DM, Vidard, L., and Rock, K.L. Characterization of MHC class II-presented peptides generated from an antigen targeted to different endocytic compartments. 2000. *Eur. J. Immunol.* 30: 2333-43
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96. Shi Y., Zheng, W., and Rock KL. Cell injury releases endogenous adjuvants that stimulate cytotoxic T cell responses. 2000 Proc. Natl. Acad. Sci. USA 97: 14590-95
97. Hilton, CJ., Dahl, AM., and Rock, KL. Anti-peptide antibody blocks peptide binding to MHC class I molecules in the endoplasmic reticulum. 2001 J. Immunol. 166: 3952-6
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